

Name: \_\_\_\_\_

**at1110paper\_\_practice\_\_test (v25)**

1. Factor the expression.

$$x^2 + 17x + 72$$

$$(x + 9)(x + 8)$$

2. Solve the equation.

$$10x^2 - 49x + 10 = 3x^2 + 2x - 4$$

$$7x^2 - 51x + 14 = 0$$

$$(7x - 2)(x - 7) = 0$$

$$x = \frac{2}{7} \quad x = 7$$

3. Expand the following expression into standard form.

$$(7x - 9)(7x + 9)$$

$$49x^2 + 63x - 63x - 81$$

$$49x^2 - 81$$

4. Expand the following expression into standard form.

$$(4x - 7)(5x + 2)$$

$$20x^2 + 8x - 35x - 14$$

$$20x^2 - 27x - 14$$

5. Solve the equation with factoring by grouping.

$$20x^2 + 15x + 24x + 18 = 0$$

$$(5x + 6)(4x + 3) = 0$$

$$x = \frac{-6}{5} \quad x = \frac{-3}{4}$$

6. Solve the equation.

$$(6x + 5)(9x + 7) = 0$$

$$x = \frac{-5}{6} \quad x = \frac{-7}{9}$$

7. Expand the following expression into standard form.

$$(2x - 7)^2$$

$$4x^2 - 14x - 14x + 49$$

$$4x^2 - 28x + 49$$

8. Factor the expression.

$$64x^2 - 81$$

$$(8x + 9)(8x - 9)$$